Antenna test report

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Contact:	Devyn Deng +86 755 36698555
Model	External Antenna
Test Engineer	Devyn Deng
Test Date	6/30/2024

Manufacturer	Dongguan Youbi Electronics Co., LTD
Address	Building 79, New Sun Industrial City, Lincun Community, Tangxia Town, Dongguan City, Guangdong Province

1. Test procedures

Standards	Description of Test Item	Result
ANSI/ IEEE 149-2021	IEEE Recommended Practice for Antenna Measurements	Compliant

2. Test Items and Equipment

	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (6m*6m*6m) 2.Network analyzer (Agilent E5071B)

3. Test Equipment

Equipement Name	**Serial No.**	**Type**	**Manufacture**	**Cal.Date**	**Cal.Due Date**
Network Analyzer	MY46110140	E5071C	Agilent	2024.05.30	2025.05.29
OTA Chamber	TJ2235-Q1793	AMS-8923-150	ETS	2022-11-30	2025-11-29
Antenna Measurement System	1685	EMQuest EMQ-100 V1.13 Build 21267	ETS	N/A	N/A

4. Name of commercial test software

Software Name	Serial No.	Version	Manufacturer
Antenna Measurement System	1685	"EMQuest EMQ-100 V 1.13 Build 21267"	ETS

5. The uncertainty is calculated using the methods suggested in the“Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO. When the test result is a critical value,we will use the measurement uncertainty give the judgment result based on the 95%Confidence intervals.

6. DUT Setup Photo

【Refer to Antenna Report1(RE305-External Antenna)_Appendix A】

7. PCB Antenna Physical Size (unit: mm)
【Refer to Antenna Report1(RE305-External Antenna)_Appendix A】

8. Antenna Electrical Specification

External Antenna	
Freq	2.4~2.5GHz&5.15~5.85GHz
Gain	5.37dBi(2.4-2.5)， -6.22dBi(5.15-5.85)
VSWR	<2
Impedance	50 ohm
Polarization	Linear
Type of Antenna	External Antenna
Outline Dimensions	Φ46mm*17mm
Manufacture	EcoFlow
Efficiency	≥41.33%(2.4-2.5)， ≥0.6%(5.15-5.85)
Connector Type	Coaxial Cable
Operating Temperature	-40℃~+85℃
Storage Temp	-40℃~+85℃

9. Antenna Type & Gain

Type: External Antenna

External Antenna		
Frequency	Gain(dBi)	Efficiency（%）
2400MHz	4.20	45.92
2410MHz	4.30	47.15
2420MHz	4.08	45.38
2430MHz	4.31	45.67
2440MHz	4.44	44.49
2450MHz	4.33	41.41
2460MHz	4.93	42.32
2470MHz	5.17	42.54
2480MHz	4.81	41.33
2490MHz	5.26	45.68
2500MHz	5.37	45.58

External Antenna		
Frequency	Gain(dBi)	Efficiency（%）
5150MHz	-9.94	1.41
5200MHz	-11.83	0.98
5250MHz	-9.66	1.70
5300MHz	-6.22	2.50
5350MHz	-10.14	1.39
5400MHz	-11.55	0.95
5450MHz	-12.92	0.90
5500MHz	-11.36	1.12
5550MHz	-12.71	1.02
5600MHz	-11.27	0.79
5650MHz	-10.12	1.05
5700MHz	-9.30	1.29
5750MHz	-10.86	0.98
5800MHz	-11.50	0.60
5850MHz	-13.47	0.69

10. Pattern and Gain

External Antenna (2.4-2.5GHz)

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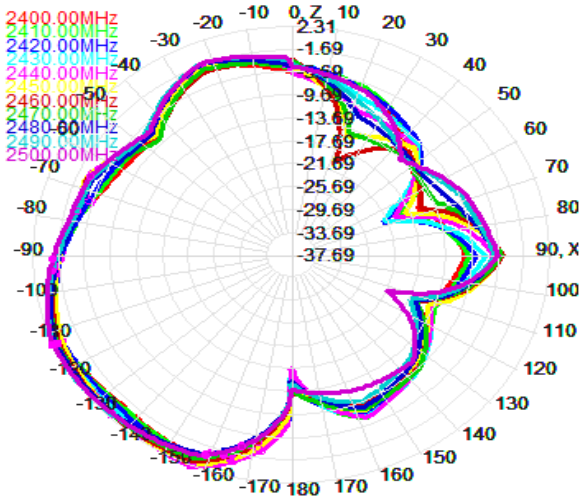

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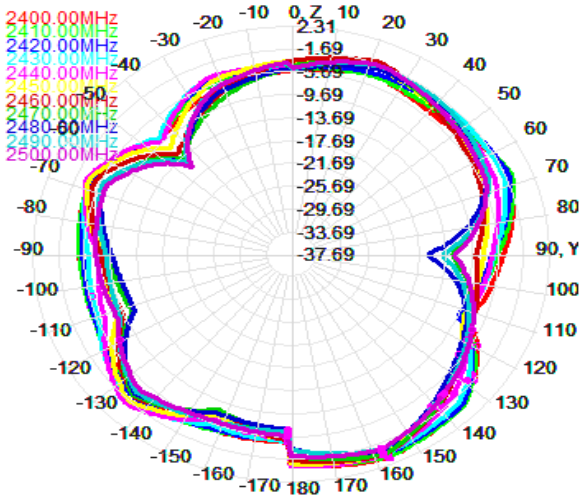

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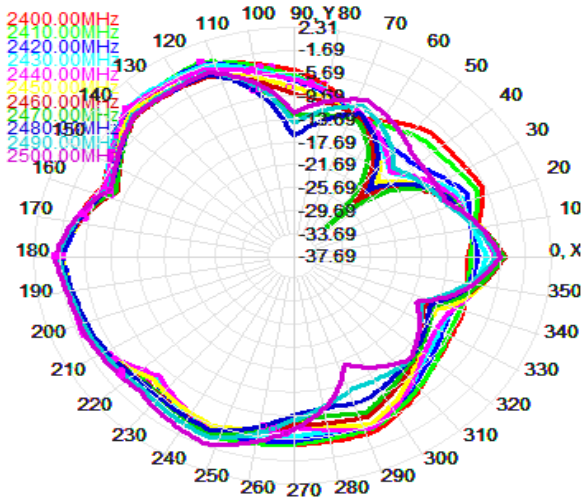

External Antenna (5.15-5.85GHz)

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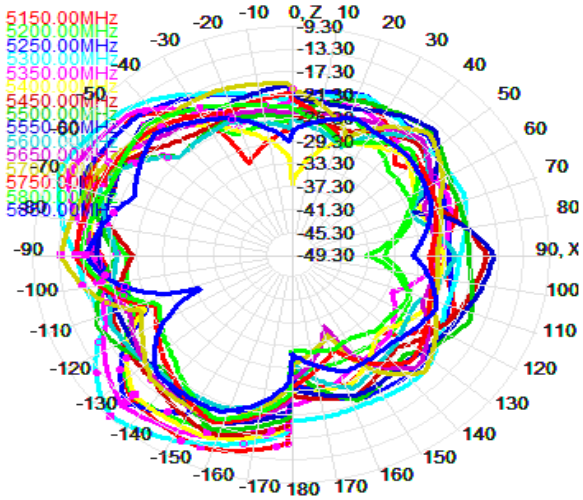

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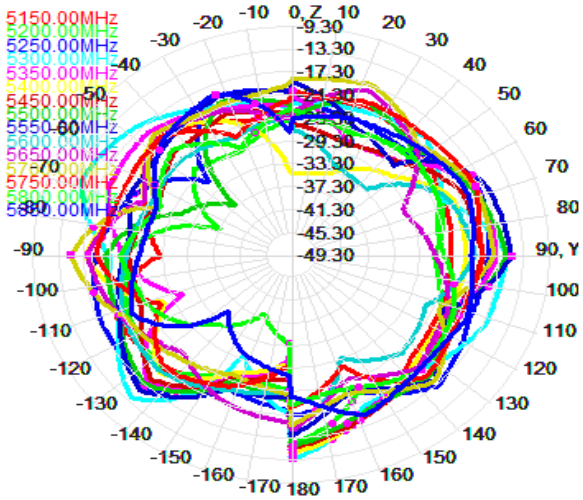
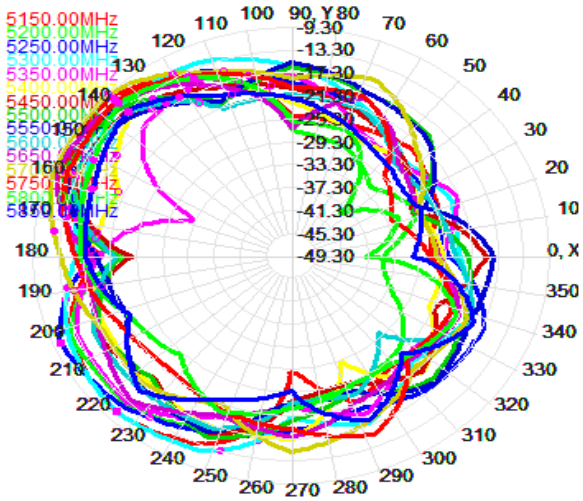
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